

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for bridging a first network and a second network, comprising:
 - a. binding a ~~network protocol-independent~~ protocol-independent bridge device driver to a first and a second network interface card device driver to access the first and the second network;
 - b. deriving topology of the first and the second network from network packets of the first and the second network that are received by the bridge device driver; and
 - c. delivering the received network packets based on a media access control (MAC) address information contained in the received network packets and the derived topology.
2. (Currently Amended) The method according to claim 1, wherein the bridge device driver is a ~~network protocol-independent~~ protocol-independent intermediate driver that utilizes a standardized driver interface.
3. (Original) The method according to claim 2, further comprising:
 - a. exposing a first application programming interface to the standardized driver interface and a protocol driver;
 - b. exposing a second application programming interface to the standardized driver interface and the first and the second network interface card drivers; and

- c. translating instructions from the protocol driver, the standardized driver interface and the first and the second network interface card drivers to effectuate transparency of the bridge device driver.
4. (Original) The method according to claim 1, further comprising: generating and modifying entries of unmatched source addresses and associated network information of the received network packets in a distribution table.
5. (Original) The method according to claim 4, further comprising:
 - a. filtering the received network packets by comparing source addresses of the received network packets to the generated entries of unmatched source addresses; and
 - b. delivering the filtered received network packets according to their destination addresses, packet types and information in the distribution table.
6. (Currently Amended) The method according to claim 2, wherein the standardized driver interface refers to Network Driver Interface Specification.
7. (Currently Amended) A machine readable medium having embodied thereon instructions of a network protocol independent bridge device driver, which when executed by a machine, causes the machine to intelligently bridge a first network and a second network, the instructions comprising:

- a. accessing the first and the second network through interfacing with a first and a second network interface card driver;
 - b. adaptively deriving topology of the first and the second network from network packets that are received from the first and the second network; and
 - c. delivering the received network packets based on a media access control (MAC) address information contained in the received network packets and the derived topology.
8. (Previously Presented) The machine readable medium according to claim 7, wherein the bridge device driver is a network protocol independent intermediate driver that utilizes a standardized driver interface.
9. (Currently Amended) The machine readable medium according to claim 8, the instructions further comprising:
- [[d.]] a. exposing a first application programming interface to the standardized driver interface and a protocol driver;
- [[e.]] b. exposing a second application programming interface to the standardized driver interface and the first and the second network interface card drivers; and
- [[f.]] c. translating instructions from the protocol driver, the standardized driver interface and the first and the second network interface card drivers to effectuate transparency of the bridge device driver.

10. (Original) The machine readable medium according to claim 7, the instructions further comprising:

generating and modifying entries of unmatched source addresses and associated network information of the received network packets in a distribution table.

11. (Currently Amended) The machine readable medium according to claim 10, the instructions further comprising:

[[c.]] a. filtering the received network packets by comparing source addresses of the received network packets to the generated entries of unmatched source addresses; and

[[d.]] b. delivering the filtered received network packets according to their destination addresses, packet types and information in the distribution table.

12. (Currently Amended) The machine readable medium according to claim 8, wherein the standardized driver interface refers to Network Driver Interface Specification.

13. (Currently Amended) A computer system, comprising:

- a. a first network interface card to couple to a first network and a second network interface card to couple to a second network;
- b. a system controller, coupled to a processor and coupled to an Input/Output controller hub that further couples to the first and the second network interface cards;

c. a memory subsystem, having embodied thereon instructions for a network protocol independent bridge device driver, which when executed by the processor, causes the computer system to intelligently bridge the first network and the second network by:

interfacing the bridge device bridge with a first and a second network interface card driver;
adaptively deriving topology of the first and the second network from network packets received from the first and the second network; and delivering the received network packets based on a media access control (MAC) address information contained in the received network packets and the derived topology.

14. (Original) The computer system according to claim 13, wherein the bridge device driver is an intermediate driver that utilizes a standardized driver interface resident in the memory subsystem.

15. (Currently Amended) The computer system according to claim 14, wherein the bridge device driver further comprises:

an Application Programming Interface translator to
~~expesses expose~~ a first application programming interface to the standardized driver interface and a protocol driver;
expose a second application programming interface to the standardized driver interface and the first and the second network interface card drivers; and

translate instructions from the protocol driver, the standardized driver interface and the first and the second network interface card drivers to effectuate transparency of the bridge device driver.

16. (Currently Amended) The computer system according to claim 13, wherein the bridge device driver further comprises:
a packet analyzer to generate and modify entries of unmatched source addresses and associated network information of the received network packets in a distribution table.
17. (Currently Amended) The computer system according to claim 16, wherein the bridge device driver further comprises:
a packet delivery engine to
filter the received network packets by comparing source addresses of the received network packets to the generated entries of unmatched source addresses; and
deliver the filtered received network packets according to their destination addresses, packet types and information in the distribution table.
18. (Currently Amended) The computer system according to claim 14, wherein the standardized driver interface refers to Network Driver Interface Specification.